

# THE LOG PERIODIC

www.scvemc.org Santa Clara Valley Chapter of IEEE Electromagnetic Compatibility Society

## IEEE SCV EMC Society Meeting: Tuesday, December 14, 2010

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Time: Social 5:30 p.m. Presentation 6:30 p.m.

Place: Applied Materials Bowers Cafeteria  
3090 Bowers Ave., Santa Clara, CA 95051-0804

Subject: EMC/EMI Issues in Biomedical Research

Speaker: Prof. Ji Chen, ECE Dept., University of Houston

#### Abstract:

The interactions between electromagnetic signals and biomedical systems lead to safety considerations for medical devices and patients. In this talk, we will present some recent investigations on the EMC/EMI issues related to these scenarios. In particular, we will discuss 1) safety evaluation for pregnant woman under walk-through metal detector, 2) thermal and temperature evaluation of pregnant woman models under MRI RF coil, 3) effects of implantable devices within human subject models under MRI coils, and 4) the interactions between vehicular mounted antenna and bystanders with implantable medical devices.

#### Speaker Bio:

Dr. Ji Chen received the Bachelor's degree from Huazhong University of Science and Technology, Wuhan, Hubei, China, the Master's degree from McMaster University, Hamilton, ON, Canada, in 1994, and the Ph.D. degree from the University of Illinois at Urbana-Champaign in 1998, all in electrical engineering. He is currently an Associate Professor with the Department of Electrical and Computer Engineering, University of Houston, Houston, TX. Prior to joining the University of Houston, from 1998 to 2001, he was a Staff Engineer with Motorola Personal Communication Research Laboratories, Chicago, IL. Dr. Chen has received outstanding teaching award and outstanding junior faculty research award from College of Engineering at University of Houston. He is also the recipient of ORISE fellowship in 2007. His research group also received the best student paper award at IEEE EMC Symposium 2005 and the best paper award from IEEE APMC conference in 2008.

#### Refreshments:

Dinner and beverages will be served free of charge.

$$\nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t}$$

$$\nabla \times \vec{H} = \frac{\partial \vec{D}}{\partial t} + \vec{J}$$

$$\nabla \cdot \vec{D} = \rho$$

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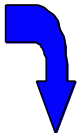
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